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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,157	02/14/2001	Yuko Hiroshige	030675-050	8320

7590 02/08/2005	EXAMINER
Platon N. Mandros	LUDWIG, MATTHEW J

ART UNIT	PAPER NUMBER
2178	

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DATE MAILED: 02/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td></tr>
<tr><td>09/782,157</td><td>HIROSHIGE, YUKO</td></tr>
<tr><td></td><td>Examiner</td><td>Art Unit</td></tr>
<tr><td></td><td>Matthew J. Ludwig</td><td>2178</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 October 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17</u> is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-17</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to communications. Amendment filed 10/6/04.

2.   Claims 1-17 are pending in the case. Claims 1 and 14 are independent claims.

3.   Claims 1-8, and 10-17 *remain rejected* under 35 U.S.C. 102 as being unpatentable over

Liaw. Claims 1-13 remain rejected under 35 U.S.C. 101. Claim 9 *remains rejected* under 35

U.S.C. 103(a) as being unpatentable over Liaw in view of Barg et al. The Examiner has extended

the 35 U.S.C 101 rejections to include claims 13-17.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

4.   **Claims 1-17 are rejected under 35 U.S.C. 101 because the claimed invention is**

directed to non-statutory subject matter.

Claim 1 and its dependents set forth a "table data management means" that are not

clearly set forth as being implemented on a computer or computer-readable-medium. The scope

of the claim amounts to nothing more than manipulation of an abstract idea. At best, the claim

would read on a computer program per se, which does not constitute statutory subject matter.

The claims fail to recite a functional interrelationship between data elements within the table data

management unit resulting in data *per se*. Functional descriptive material consists of data

structures and computer programs, which impart functionality when encoded on a computer-

readable medium. Therefore, the multi-dimensional table data management unit is non-statutory

for at least the reason that it is merely a data block with n-dimensional tables.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   **Claims 1-8, and 10-17 are rejected under 35 U.S.C. 102 as being anticipated**

by Liaw et al. (hereinafter Liaw, U.S. Patent No. 5,572,644).

In regard to independent Claim 1 (and similarly independent Claim 14), Liaw teaches

selecting a group of 3-D cell blocks, i.e., cell ranges spanning more than one page. To extend

the block (254) (of Fig. 2C) into a 3-D block, the user specifies an additional or 3rd dimension by

selecting an appropriate page identifier (Col. 10, lines 19-23). In addition, Liaw teaches that

pages may be selected or grouped together, thereby providing a means for changing multiple

pages simultaneously. In much the same manner as cells from a spread are grouped into 2-D

blocks, a range of pages are grouped by specifying beginning and end members (Col. 10, lines

29-33). In addition, with group mode active, an activity in a page which is a member of a group

can also affect similarly situated cells of the other pages of the group (Col. 10, lines 52-54;

compare to Claim 1 (and similarly Claim 14), *"... table data management means for defining a*

data block as a processable data group, the data block being composed of a plurality of (n-1)-

dimensional tables (n is a natural number equal to or larger than 3), and for defining item

data of the processable data group as n-dimensional data for data management").

In regard to dependent Claim 2 (and similarly dependent Claim 15), Liaw teaches that

with group mode active, an activity in a page which is a member of a group can also affect

similarly situated cells of the other pages of the group (Col. 10, lines 52-54; compare to Claim 2

(and similarly Claim 15), *"... calculation processing means for executing a table calculation*

function based on the item data in each dimension of the data block"). Though Liaw does not

explicitly teach a calculation means, it would have been obvious to one of ordinary skill in the art

at the time of invention to assume, given the teaching of Liaw above, that page calculations

would have taken place and would have acted as claimed providing the benefit of updating or

creating cells in the data block.

In regard to dependent Claim 3 (and similarly dependent Claim 16), Liaw teaches that

whether 2-D or 3-D in nature, blocks of cells may be easily copied and cut (i.e., moved) using

drag-and-drop editing techniques of the present invention. As shown in Fig. 4G for a 2-D block,

for example, a method for copying a block of cells includes (1) selecting a source block by

dragging a range of cells (e.g., mouse button-down events coupled with mouse movement across

the range; close selection with a button-up event), (2) dragging the block (e.g., click within

block, followed by repeated mouse button-down events), and (3) dropping the block (e.g., mouse

button-up event at desired target location). In a similar fashion, 3-D blocks may be dragged and

dropped (Col. 11, lines 28-39; compare with Claim 2 (and similarly Claim 15), *"... said table*

data management means execute a table editing function based on the item data of the data

block in each dimension").

In regard to dependent Claim 4 (and similarly dependent Claim 17), Liaw teaches that a

simple nomenclature is available for specifying these solid blocks of information. In a preferred

embodiment, a solid block is specified by: <<First Page>>..<<Last Page>>:<<First

Cell>>..<<Last Cell>>. For example, a solid block may be defined as A..D:A1..C4, in which

case the block spans from cells A1 to C4, and spans across Pages A-D. By permitting alias

names (i.e., user-supplied alternative labels), the present invention allows the block to be

specified as 1989 Sales..1992 Sales: A1..C4; or even 1989 Sales..1992 Sales: First Quarter..Third

Quarter. Additionally, the present invention readily accommodates notebook information as well,

for example, [TAX]1989 Sales..1992 Sales: First Quarter..Third Quarter, thus permitting

information to be linked across various notebooks. Wildcard characters (e.g., * and ?) may also

be employed for cell, page, and notebook identifiers, as desired. Thus, the spreadsheet notebook

of the present invention provides a 3-D interface which readily accommodates real-world

information in a format the user understands (instead of forcing the user to adapt his or her

information to fit an arbitrary spreadsheet model) (Col. 11, lines 1-24; compare with Claim 4

(and similarly Claim 17), "*... said table data management means enclose a portion of a*

sequence of tables with punctuation tables to define the data block").

In regard to dependent Claims 5 and 6, Claims 5 and 6 reflect the multi-dimensional table

data management unit as claimed in Claim 4 and are rejected along the same rationale.

In regard to dependent Claim 7, Liaw teaches in Figs. 2C-E, individual notebook pages

are identified by page identifiers (260), preferably located along one edge of the notebook (250).

In a preferred embodiment, each page identifier is in the form of a tab member (e.g., members

261a, 262a, 263a) situated along a bottom edge of the notebook. Each tab member may include

representative indicia, such as textual or graphic labels, including user-selected titles

representing the contents of a corresponding page (Col. 8, lines 57-65; compare with Claim 7,

"... a title is attached to each of the tables of the data block").

In regard to dependent Claim 8, Liaw teaches action buttons (229) provide automated

spreadsheet operations, including sorting and summing operations. For example, a Sort button,

when invoked, performs a sort on data in a currently active block (Col. 8, lines 21-25; compare

with Claim 8, *"... in response to a plurality of sorted item data for which sorting is specified in*

the data block and a sort direction thereof, said table data management means sort the entire

data block by exchanging storage positions where item data for which the sorting is not

specified is stored").

In regard to dependent Claim 10, Liaw teaches that a non-contiguous selection of pages

may also be selected (even across different pages); for example, a selection of Pages A and D,

but not B and C, may be achieved by selecting tabs A and D while depressing a second key (e.g.,

CTRL- key). Furthermore, groups may overlap (i.e., a page can be in more than one group), as

desired. By selectively activating a group mode (e.g., by toggling group button 273), groupings

may be temporarily turned off, in which case events are not percolated to other members of the

group (Col. 10, lines 41-51; compare with Claim 10, *"... said table data management means*

combine a plurality of data blocks to generate a new data block").

In regard to dependent Claims 11-13, Claims 11-13 reflect the multi-dimensional table

data management unit as claimed in Claim 10, and are rejected along the same rationale.

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

8.   **Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liaw**

in view of Barg et al. (hereinafter Barg, U.S. Patent No. 6,707,454).

In regard to dependent Claim 9, Liaw does not specifically teach *rotate the data block*

according to a specified rotation axis, a rotation direction, and an angle to exchange storage

positions of the item data. However, Barg teaches that a "horizontal rotation" button places the

three-dimensional multiscape view into the horizontal orientation and then rotates the three-

dimensional multiscape view about an axis that is parallel to the vertical axis but which passes

through the center of the horizontal plane of the three-dimensional multiscape view. The

"arbitrary rotation" button allows the user to arbitrarily rotate the three-dimensional multiscape

view about an arbitrary axis, by linking the direction and amount of movement of the mouse to

the rotational axis and the amount of rotation of the three-dimensional multiscape view (Col. 8,

lines 36-46). It would have been obvious to one of ordinary skill in the art at the time of

invention to combine the teachings of Liaw and Barg providing the benefit of identifying

important structures in data cubes.

Response to Arguments

9.   Applicant's arguments filed 10/6/04 have been fully considered but they are not

persuasive. The Examiner has extended the rejection under 35 U.S.C. 101 to include claims 14-

17, and therefore this action has been made non-final. The Applicant argues on page 6 of the

amendment that the data management unit implemented on a computer overcomes the 35 U.S.C.

101 rejection; however, the claim fails to describe functional descriptive material. The rejection

has been modified to describe the inefficiency of the claim language.

Applicant argues on pages 8 and 9 of the amendment that the tables taught by Liaw are

two-dimensional tables while three-dimensional blocks are merely defined by selecting an

appropriate page identifier. Furthermore, the applicant states the tables are two-dimensional and

data is manipulated in block fashion based on the two-dimensional block plus an appropriate

page identifier. The claim language, as presently claimed, fails to preclude the Examiner from

utilizing Liaw to teach the manipulation of item data of the processable data group as n-

dimensional data for data management. More specifically, the broad nature of the work

'manipulating' could be interpreted in many different ways. The 'manipulation' could come

before or after the original processable data group. To extend the block (254) (of Fig. 2C) into a

3-D block, the user specifies an additional or 3rd dimension by selecting an appropriate page

identifier (Col. 10, lines 19-23). Finally, Liaw teaches that pages may be selected or grouped

together, thereby providing a means for changing multiple pages simultaneously. In much the

same manner as cells from a spread are grouped into 2-D blocks, a range of pages are grouped by

specifying beginning and end members (Col. 10, lines 29-33). In addition, with group mode

active, an activity in a page which is a member of a group can also affect similarly situated cells

of the other pages of the group (Col. 10, lines 52-54).

Conclusion

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to James H Blackwell whose telephone number is 703-305-0940.

The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ML
February 7, 2005

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER